



weissr
capex

How to Boost Your Company's Cash Flow with Weissr Capex



Revolutionizing Capital Expenditure Strategies

Imagine a future where your company's cash flow increases by up to 100%. This isn't just a possibility—it's a reality with the Weissr Capex Strategy Tool, designed to transform your approach to capital investment.

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EXECUTIVE SUMMARY

What is Weissr Capex and why is it useful?

Weissr Capex is a tool that helps industrial companies to allocate capital efficiently and secure in a way that maximizes their long-term cash flow. It is based on systems thinking and uses a method of creating and combining strategic building blocks (SBBs) that represent different capex decisions for each plant.

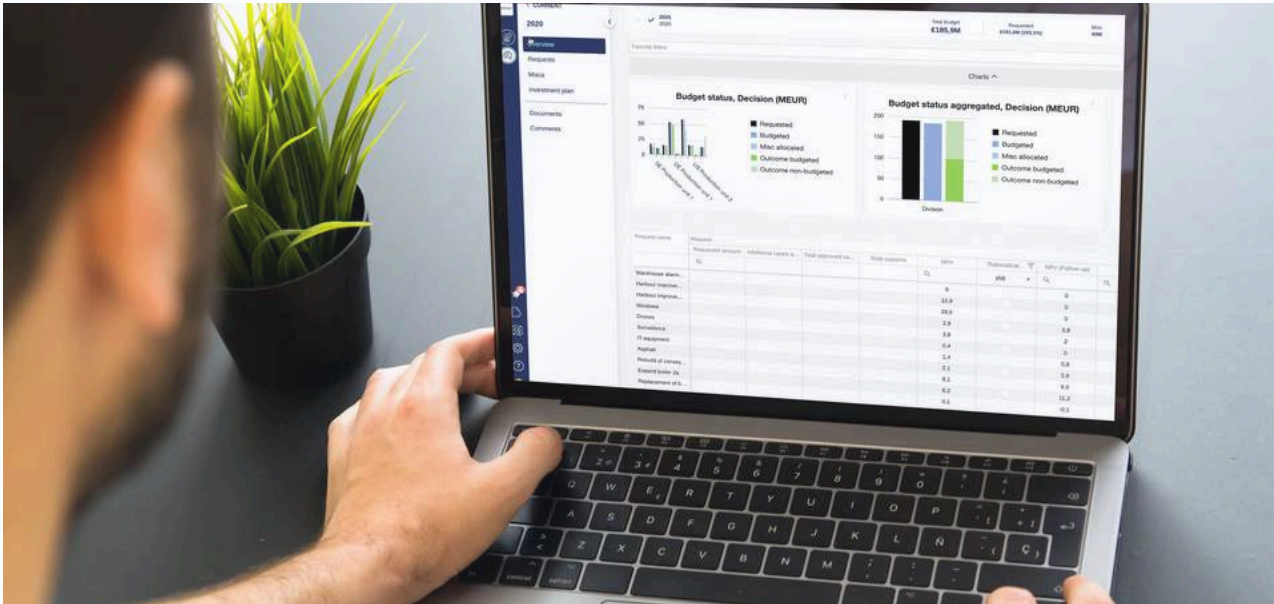


What are the drawbacks of traditional capital budgeting approaches?

Traditional capital budgeting approaches, such as short payback, high NPV or IRR, tend to chase projects that lower the company's cash flow even if assumptions are realized. They also ignore the interdependencies and trade-offs between different capex decisions and their impact on the whole company.



What are the steps of using Weissr Capex?



01

Develop a base alternative that follows certain rules and serves as an analytical starting point.

02

Create a long list of SBBs (Strategic Building Blocks) that represent different major capex decisions, such as debottlenecking, plant closure, capability addition, conversion, new line, or plant.

03

Combine SBBs into strategic alternatives that make sense and improve the long-term cash flow of the company.

04

Use the built-in features and safety measures, such as sensitivity analysis, checks and balances, to ensure a high-quality and productive process.

What are the benefits of using Weissr Capex?

Boost Cash Flow

It helps you boost your company's cash flow by 20 to 100 percent by prioritizing the best combination of capex decisions.

Holistic Decisions

It provides a new and better way of making capex decisions that considers the whole company and the long-term perspective.

Enhanced Efficiency

It improves the speed, quality, and consensus of the capex strategy process by involving the best expertise and using a common environment.

Long-Term Planning

It assigns a strategic role and a capex master plan to each plant that guides the future investments.

A photograph of a man with a beard and mustache, wearing a dark blue suit jacket, a white shirt, and a blue patterned tie. He is looking upwards and to the right with a slight smile. The background is a bright blue sky with scattered white clouds. The image is split vertically: the left side is a solid dark blue background with white text, and the right side is the photograph of the man.

Allocate Your Capital Wisely and Efficiently

SYSTEMS THINKING VS REDUCTIONISTS THINKING

At its core, our approach to capex allocation is straightforward. However, it stands out as a superior method because it is founded on “systems thinking”, in contrast to the prevailing “reductionist thinking” in companies capex process.

Reductionist thinking posits that a complex system can be understood by analysing its individual parts. While this method may be useful for studying simple, well-defined problems, it often falls short when addressing complex, dynamic systems where interactions and interdependencies among components are crucial.

Companies with numerous assets operate as dynamic, complex systems. Consequently, capex decisions must be approached holistically, treating production sites and assets as interconnected and interdependent elements of a larger system.

The benefits of applying this approach cannot be overstated. The difference is dramatic. We will explore it more in detail in this document.



Example of systems thinking

Consider a company named “Europe” contemplating a \$100 million capex investment to expand capacity at its Berlin plant. Is this the best use of shareholder capital?

What if the company instead focused on debottlenecking a production line in Stockholm, investing in new capabilities at another site, consolidating Madrid's capacity by adding two additional lines at another site, and optimizing all production lines? Would that be a more effective use of the \$100 million?

This scenario represents only one strategic intent. What if we combined this initiative with other strategic initiatives, including mergers and acquisitions, conversion needs, and responses to sudden price or demand declines over the next 5–30 years?

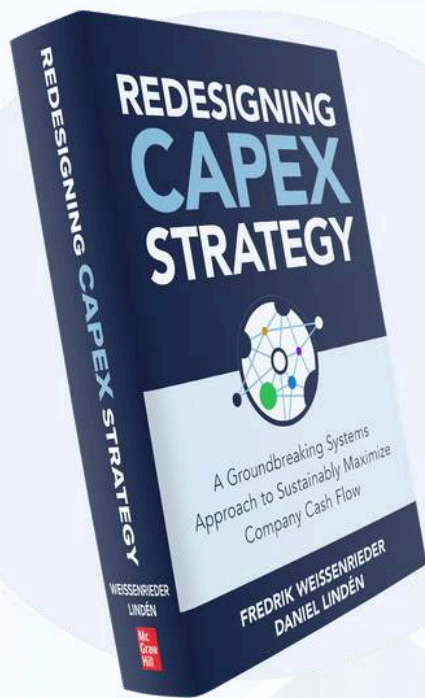
The number of companywide strategic alternatives to compare could be numerous, often amounting to hundreds. How much cash flow would each of them generate over time? How should they be ranked, considering the discounted cash flow and inherent uncertainties?

Weissr Capex is built to handle that complexity. With ease and complete transparency.

THE PROBLEM WITH TRADITIONAL CAPITAL BUDGETING

Typically, your company's capital budgeting process relies on reductionist thinking, prioritizing projects with short payback periods, high NPV, or high IRR. However, this approach inevitably leads to reduced overall company cash flow, even if the underlying assumptions are realized.

In fact, having a built-in systematic error in your capex process can be worse than making decisions based on gut feelings, which, of course, is also not recommended. While gut feelings might occasionally result in the right decisions, built-in systematic errors consistently lead to sub-optimal outcomes.



This document will not delve into the detailed implications of this prevailing methodology; those are thoroughly explained in our acclaimed book, "Redesign Capex Strategy".

A condensed version, "The Tail Wags the Dog," is available for download on our website. Instead, this document will briefly outline the principles and process of our holistic approach, which is rooted in systems thinking.

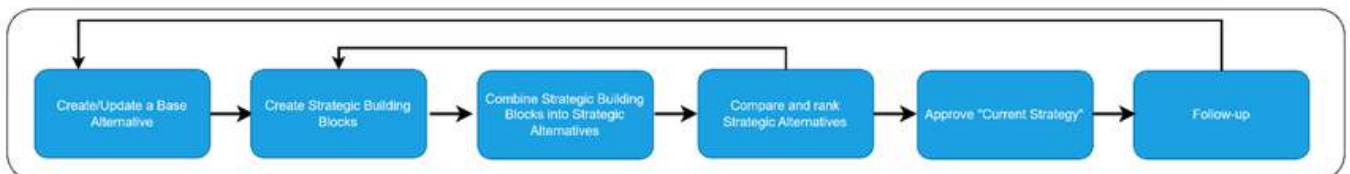
THE SYSTEMS THINKING BASED PROCESS



The process for a system thinking approach is based on a capex strategy model. The purpose of creating an economic model is to enable whole-business capex strategy analyses. To create the economic model that encompasses the company's entire production system require six major phases:

1. Asset mapping for the base alternative (BA)
2. Cash flow for the base alternative
3. Strategic building blocks (SBBs)
4. Strategic alternatives (SA)
5. Sensitivity analysis
6. Approving and communicating the strategy.

The whole process is illustrated below. Each step will be described briefly in the remaining part of this document. Weissr Capex is purpose-built for facilitating this entire process.



CREATING THE BASE ALTERNATIVE

The base alternative may not be a realistic strategy since it's based strictly on the going-concern principle. It rather serves as an analytical starting point for the work to come. All plants are treated the same here.

The base alternative needs to follow certain rules:

Rules

1. It is a going concern, "as is" alternative. There is no strategic intent.
2. Assume that each plant/mill produces today's product mix, serving today's customers (but consider market demand changes for the future)
3. Your current capacities must remain unchanged (no matter where markets are heading)
4. The future (5-30 years, depending on industry) capex need must be identified, and it must consider not only wear and tear and future environmental/safety standards, but also creep in customer expectations regarding quality.
5. The base alternative does not develop itself compared to competition so there will be a slight EBITDA margin decline in the future assumptions.



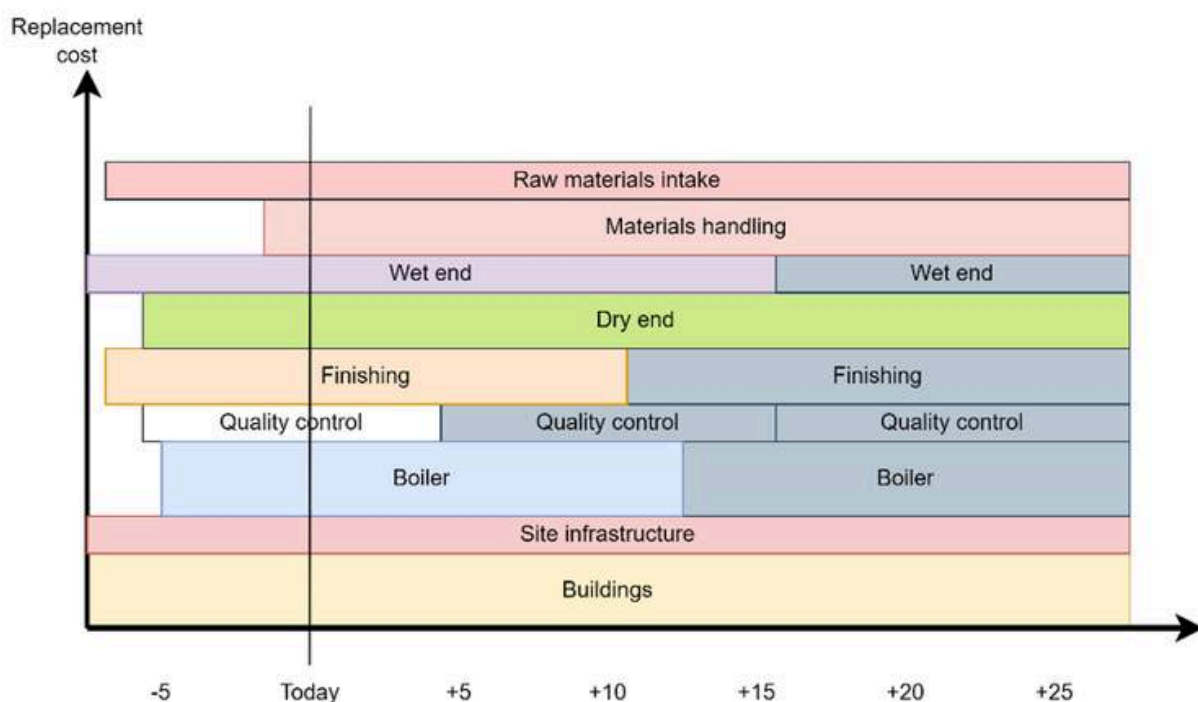
Asset mapping for the base alternative

The purpose of the asset mapping is to identify the company's production sites, their major production assets, equipment machinery and other assets above a certain threshold. The threshold depends typically on the industry and can vary between \$50.000 to \$1 million.

The required data for the assets are:

- Operational age
- Turnkey cost to replace/refurbish it today
- Current useful life
- The assets general standard useful life

The answer to those questions will help generating an investment plan with capex needs for the base alternative, extending over the coming 5-30 years. The asset map can look something like this for a typical paper company:



In this simplified case, the facility consists of nine assets, all of which are over the replacement cost threshold. Some were built/acquired several years before the analysis, since the facility has been in operation for decades. Half of the assets including buildings and site infrastructure will not be replaced within the nearest 20 year.

Additional small-scale capex

The asset mapping for the base alternative will identify the assumed capex needs over the period of the economic model. The base alternative must also consider estimated capexes for environmental regulations and safety standards.

In addition, small inevitable “small-scale” capex that will crop up over the years. To account for these and to cover unexpected capexes, we have we’ve found that that calculating a percentage of the total site’s replacement cost suffices. The percentage is industry related but typically vary between 0,3 and 0,5 % each year of the total cost to replace the entire site.

The result of the asset mapping exercise is what we call a “strategic asset ledger”, categorized by site and include:

- All known and necessary capexes required to maintain the site’s ability to deliver to customers long-term.
- Structure and infrastructure capexes, including specific, known needs as well as a percentage of the total cost of the replacing all the site’s production assets.
- Small-scale production capexes, calculated as a percentage of the site’s total replacement cost.

Cash flow for the base alternative

The next phase is to set-up a cash flow structure and generate the cash flow for the base alternative. The cash flow structure is different from industry to industry and needs to be set-up to enable future simulations. These cash flow is not only per site, but they are also per each site's major production asset where applicable. There are two categories:

1. Production volume, pricing and variable costs
2. FTEs/headcount and remaining fixed costs such as maintenance, overhead/selling, general and administrative (SG&A)

With each site's cash flow mapped, we now have a site-specific cash flow model with data for the previous 3-5 years, not from accounting perspective but from a production perspective. Specifically, each site's EBITDA cash flows.

In most industries, this is a practical approach to cash flow (before other cash flow items such as taxes, change in working capital, and capital expenditures that are accounted for in projected future years).



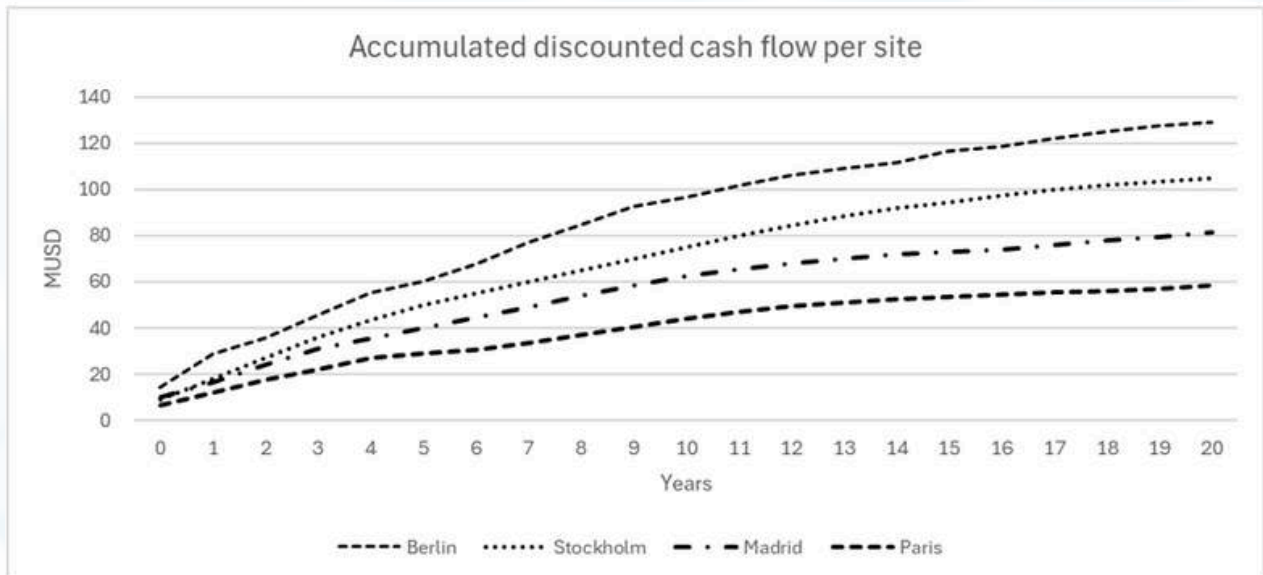
The table below illustrates how a simple cash flow model can look like. The base year here represents the historical 3-5 years. Not all future years are presented either.

Site: Berlin	Base year	Year 1	Year 2	Year 5	Year 10	Year 20
Capacity	200,0	200,0	200,0	200,0	200,0	200,0
Production	195,0	197,0	198,9	200,0	200,0	200,0
Price / unit	0,54	0,55	0,55	0,57	0,60	0,66
Variable direct costs/unit	-0,20	-0,20	-0,21	-0,22	-0,23	-0,27
Freight cost / unit	-0,10	-0,10	-0,10	-0,11	-0,12	-0,13
Sales	105,30	107,40	109,60	113,50	119,30	131,80
Variable Direct Cost	-39,00	-40,00	-41,00	-43,10	-46,40	-53,90
Freight Cost	-19,30	-19,80	-20,30	-21,40	-23,00	-26,70
Fixed Costs	-20,00	-20,50	-21,00	-22,60	-25,60	-32,80
EBITDA	27,00	27,10	27,30	26,40	24,30	18,40
EBITDA Margin	26%	25%	25%	23%	20%	14%
Change in Working Capital		-1	-1	-1,1	-1,1	-1,2
Tax		-5,4	-5,5	-5,3	-4,9	-3,7
Capex		-5	-3	-11	-4	-4
Cash Flow		15,7	17,8	9,1	14,3	9,5
CO ₂ emissions	117	118	120	121	123	127

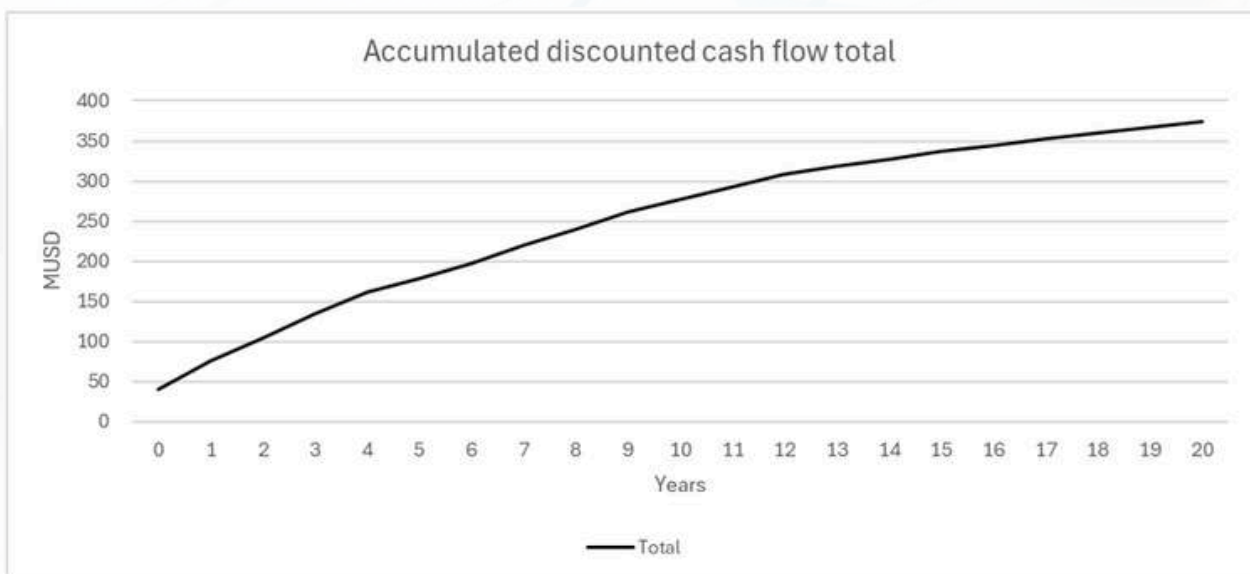
Because there are no strategic capexes in the base alternative (BA), Berlin's capacity will remain the same. Demand is predicted to rise; by year 5, Berlin should be running right at peak capacity. Although the price per unit will rise, its production and freight cost will rise too.

As such, Berlin's EBITDA margin will continually decline over the next 20 years (thanks to technology/scale improvements driving creative destruction). The capex data emerges from the asset mapping described in the previous section.

Once the cash flow for all sites has been projected, the economic model returns the site-specific accumulated discounted cash flows in the figure below:

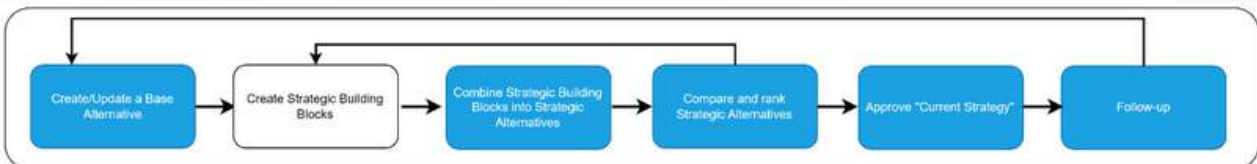


Adding all four sites together results in a BA value curve for the entire company shown in the picture below. This curve will serve as the main reference curve for the strategic alternatives to be developed.



CREATE STRATEGIC BUILDING BLOCKS (SBBS)

Once the base alternative is established, the next logical question is: What are the larger, more strategic opportunities for each site? The quality of these projects, whether "good" or "bad," cannot be accurately judged in isolation. Some will have a short payback, high NPV/IRR, but that should not be used to base any conclusions upon at this moment. Given that we are dealing with a system of interdependent assets, a systems thinking approach is required.

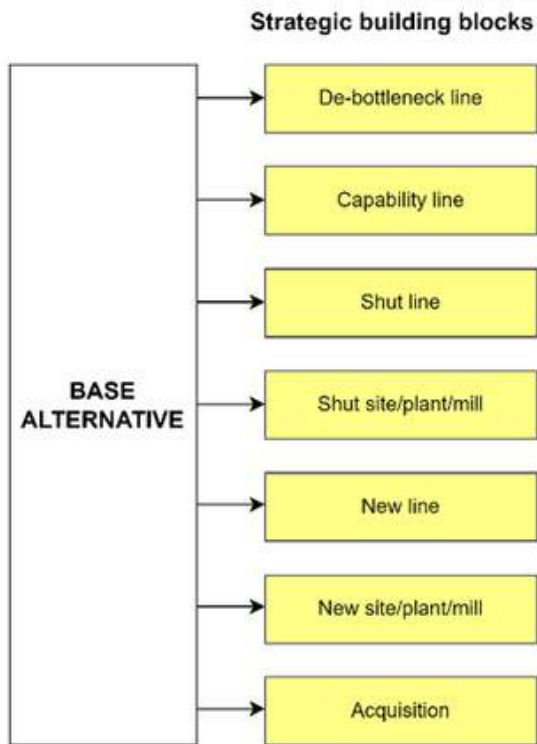


By integrating these individual capital expenditure (capex) projects and running them through the capex strategy model, we can evaluate how various combinations of projects impact the overall long-term system cash flow.

By strategic capexes, we mean capex that change something vital in the company, that can move the needle. Such strategic investments include:

- Expansion of existing assets' capacities
- Addition of capabilities
- Conversion of sites
- Other major rebuilds of existing assets
- Line closures in a site
- Complete site closures
- Brownfields or greenfields
- Acquisition of other sites

Each production site should have somewhere between 5 and 10 such opportunities, what we call strategic building blocks, or SBBs. An SBB is only for one site. There is never a SBB covering two sites. That would require two SBBs. With these building blocks, seen as Lego blocks, you can create any business story.



The SBBs only carry the deviations compared to the base alternative for the specific projects. This means that changes in the base alternative will not require any modifications of the SBBs. They will be applied automatically.

Obviously for most SBBs, there is the required capex investment: the turnkey cost of the project. The complexity comes into play when you consider how one change ripples throughout the production ecosystem. How does the decision affect new costs and how does it result in cost savings?

- Capital expenditures avoided
- Marginal increase of raw material costs
- Specific energy consumption changes
- Cost of shipping and storing extra raw material
- Cost of storing and shipping the finished product
- Additional equipment to handle higher volumes downstream
- The demand for water, electricity and other utilities
- Waste by-product and cost of disposal
- Labor costs for running the at higher production
- Change in selling, general and administrative expenses
- Change in maintenance costs
- Environmental clean-up
- Severance/redundancy costs
- Leases / contracts broken
- Land and equipment sold.

Overall, the data points to address for each SBB will depend on the industry and the details of the full cash flow model.

Building SBBs is an iterative process. Typically, you start with the obvious ones that come into mind. Once the results of the simulations start to emerge, additional ones are created. A typical initial list of SBBs can look like this:

Berlin

- Close
- Debottleneck + 15 units
- Convert
- Brownfield

Stockholm

- Close
- Debottleneck +30 units + quality upgrade
- Debottleneck +50 units + quality upgrade

Copenhagen

- Close
- Debottleneck +25 units

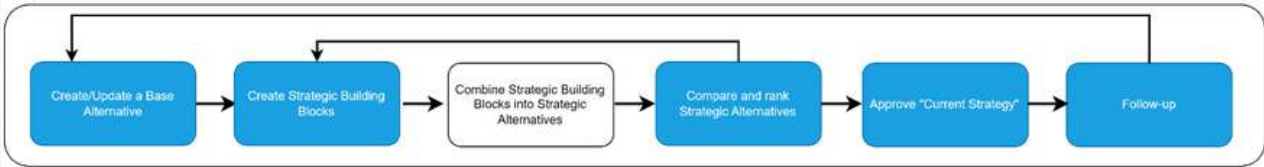
Paris

- Close
- Debottleneck +70 units
- Debottleneck +100 units

Amsterdam

- Acquire
- Acquire and close

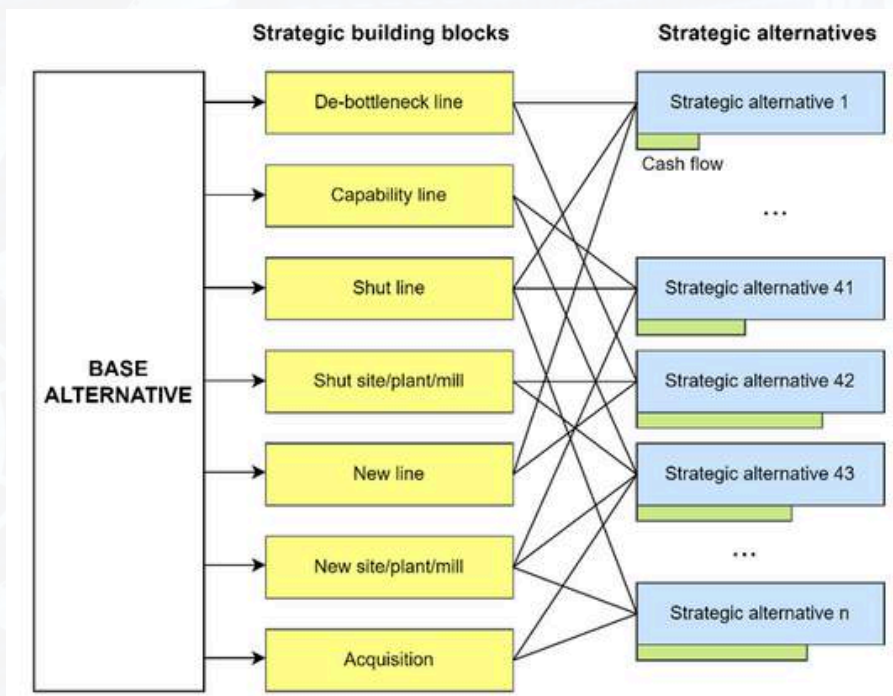
COMBINING BUILDING BLOCKS INTO STRATEGIC ALTERNATIVES



The next step is to create combinations of the above SBBs, which we call strategic alternatives.

Which debottlenecking can be combined with closing a mill, changing capabilities, and adding a line in an existing plant? How do you deal with a growing market- by large debottlenecking projects, greenfields, or both? How should this be implemented over time? How do you deal with a declining market—line closures, conversions, plant closures - and how should these be prioritized over time?

This is an iterative process that must involve the best market technology, manufacturing, financial analysis, and management resources.



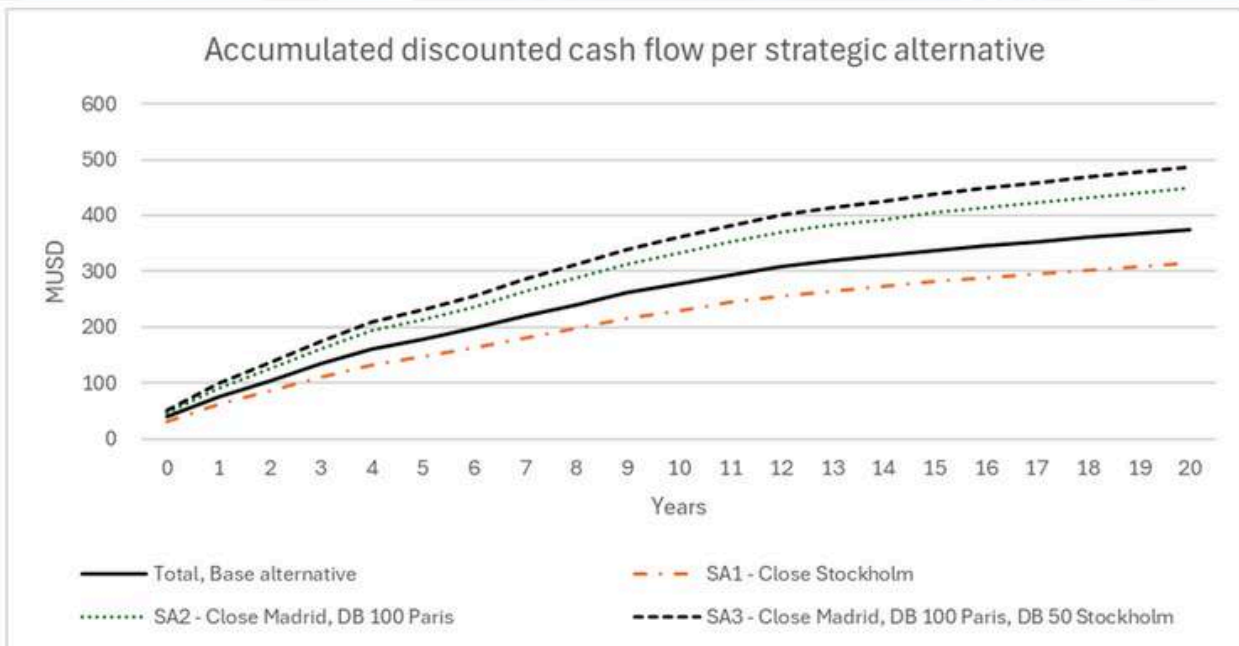
Different timings will also generate corresponding SBBs. Debottleneck Berlin 2025, 2027 and 2030 will be represented by three different SBBs which of course cannot not be combined.

To create a strategic alternative from building blocks in Weissr Capex takes around 5 seconds and all data from all building blocks are applied.

However, each combination of building blocks may need an import from your linear programming tool with the same asset settings regarding capacities and capabilities. If you use such a tool for optimizing production based on manufacturing costs, capabilities, freight, etc., or other adjustments of the raw material situation, might be necessary for instance.

The output from the different strategic alternatives is evaluated mainly from an accumulated discounted cash flow and EBITDA perspective.

The accumulated cash flow from some of the strategic alternatives can easily be compared together and the one with the highest value is from a model perspective the most valuable strategy. In the example below, the only alternative SA1 was worse than the base alternative while both SA2 and SA3 were better of.



Which is the best maximizing long-term cash flow combination of decisions going forward that also makes practical sense and is something that can be implemented by the organization? And that meets financial restrictions? Where customers' reactions are acceptable?

The number of combinations can be millions in theory and a tool cannot itself figure out what are realistic alternatives. It would produce nonsense combinations with great future cash flow. It needs to be an iterative process involving the best expertise in your company. You will come up with one, or a handful of combinations (strategic alternatives), that significantly improve your company, where the future long-term cash flow improves significantly. You should expect a 20-100% improvement.

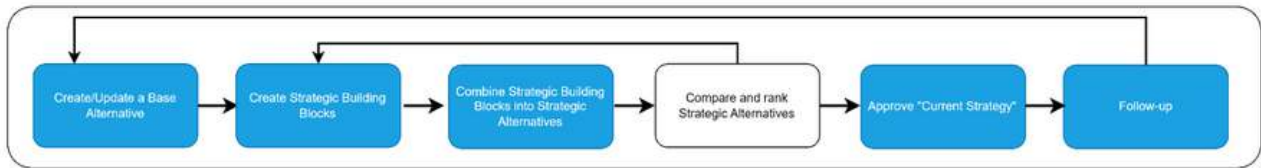
DISCOVERIES AND LESSONS LEARNED

In this phase, you may already see one thing that is very interesting. And that is an important lesson. The alternative that maximizes long-term cash flow is likely to be a combination of strategic building blocks with relatively long paybacks. This might be counterintuitive but is completely in line with what we write about in our [book "Redesign capex strategy"](#). Paybacks and NPV/IRR etc. calculated in the capital budgeting process are completely irrelevant for improving a whole company's cash flow.

We have experienced many interesting and non-intuitive situations, where the best combination of decisions going forward was a combination where none of the individual building blocks had a payback at all. If you have a hard time believing this, then download and read our [paper "The Tail Wags the Dog"](#).

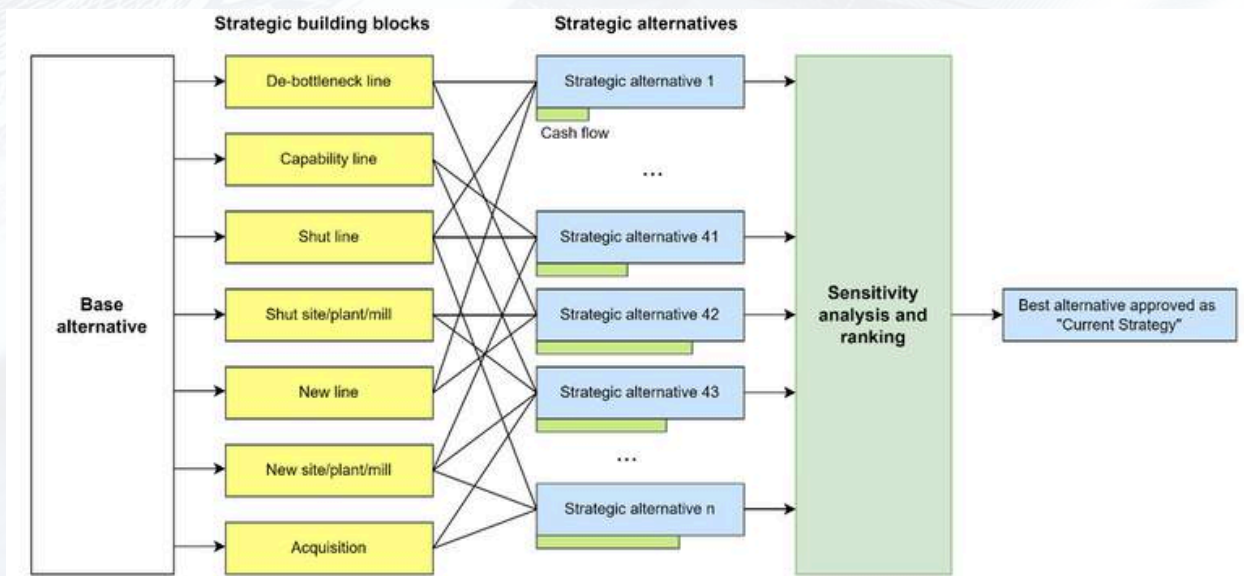
Your individual capex requests in your capital budget will now have longer paybacks but your company's cash flow will improve notably. In other words, if you were to neglect the conclusions from the process described here, you would pick the faster payback projects and consequently lower your company's cash flow. It is your choice.

SENSITIVITY ANALYSIS AND LIMITATIONS



Throughout the process, the team should ask: Do these numbers make sense? Do these figures add up? Do the data and calculations pass the gut test?

The team can and should do capex-specific sensitivity tests for relevant strategic building blocks but also systemic sensitivities such as price changes, market demand, capex needs, raw material, energy, labour and capital costs and regulatory requirements, currency fluctuations and environmental sustainability. Our platform facilitates this.



Finding the collection of strategic decision that generates maximum cash flow is one thing. Figuring out whether the company can pursue that strategy is another. At this point the team must ask if each of the strategic candidates is practically possible considering current resources, financial restrictions and customer expectations.

Can it be funded without going to the capital market? These issues are potential limitations. A useful feature of the model is that it can value the cost of those limitations down to the dollar. If your company cannot have the financial resources to support the most attractive alternative, the team might be forced to pursue its second-best alternative.

EXECUTION AND GOVERNANCE

After potentially hundreds of strategic building blocks (SBB) and strategic alternatives (SA) have been created, analysed, compared and subjected to sensitivity analysis. One SA will emerge as the winner. Now your team needs to translate this strategy into communicable and actionable steps. This document will not dig deeper into that. It is described further described in our [book "Redesign capex strategy"](#).

However, one thing is important to bring up. How does the capex strategy process described relate to the capital budgeting process? It does not need to replace it. It rather adds a new dimension to it, an overlay of the company's capex management and capital budgeting. The short- to medium-term capex process works the more or less the same way, no matter what company industry and country you go to.

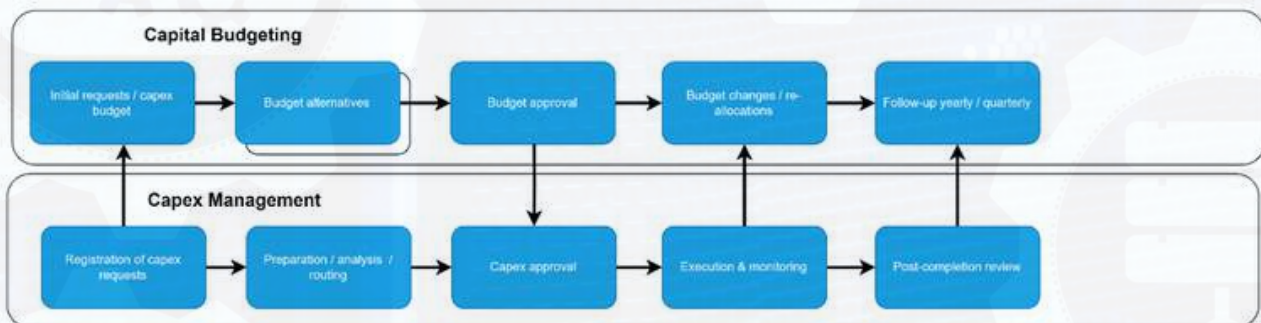
Capital budgeting (time frame 1-3 years)

- Gather capex need and opportunities from the organization
- Prioritize and rank
- Approve total capex budget (often arbitrary amount based on history or even depreciation levels)
- Follow-up on the capex budget during the year and re-allocate capital as needed due to unforeseen events

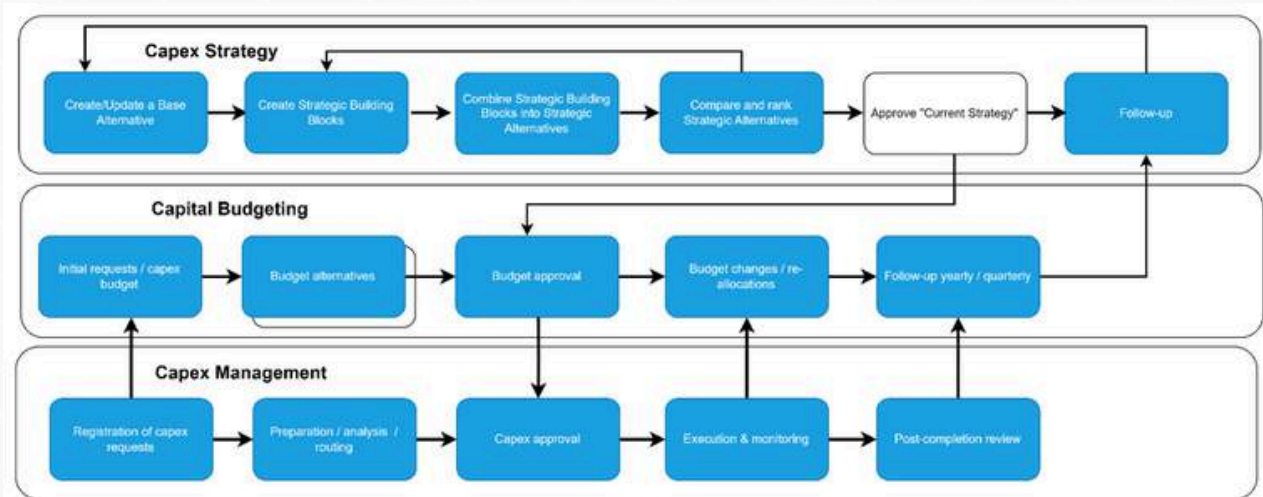
Capex process (day-to-day operations)

- Submit actual requests and rout through various checkpoint sand analysis
- Base decisions on key performance indicators and is there is room in the budget
- Execute capex and follow-up on outlays. Follow-up on capex projects top determine if the decision delivered the promised results in the post-completion review.

This process can be illustrated in the following way.



It works from pure control and administrative point of view, but it needs strategic steering: Where should capital be allocated? In what businesses and sites should it be invested? What should be done now versions 5-10 years from now? How much should be allocated? In most companies, the process just described is a tail that wags the dog; it's putting the cart before the horse.



The capex strategy is what dictates which capex needs and opportunities are included in the capex budget, and ultimately what decisions are made. The capex strategy sets the rules for what sites to get to invest, and under which conditions (not the individual capex projects' payback, NPV and IRR). The capex and budget go from being a piecemeal ranking process to being the vehicle of the strategy. The figure below adds a proper capex strategy layer to the overall capex process.



WEISSR CAPEX

BUILT ON DEEP INSIGHTS AND LONG EXPERIENCE

During the last decades, Weissr has partnered with some of the largest capital-intensive companies in the world.

VERIFIED SUPERIORITY:

The superiority of Weissr Capex's holistic approach described in this document has been verified at over:

- **1,000 production sites globally**
- **Combined replacement value exceeding \$700 billion**



PROVEN RESULTS:

This approach has consistently resulted in:

- **Cash flow boosts ranging from 20% to 100%**

UNIQUE EXPERTISE:

Weissr Capex encapsulates all the expertise and insights developed from this extensive experience.

This makes us unique.

Ready to Transform Your Capex Strategy?

Unlock your company's full potential with Weissr Capex. Our proven systems thinking approach has empowered numerous industrial leaders to significantly boost their cash flow. Don't let traditional capital budgeting methods limit your success.

**Embrace change.
Maximize your cash flow.
Secure your company's future
with Weissr Capex**

Contact us today to schedule a free consultation and discover how Weissr Capex can revolutionize your capital allocation process. Let's build a brighter financial future together.

Download Your Guide ["The Tail Wags the Dog" here](#)

Get in Touch



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